

# REAL ESTATE APPRAISAL AND SUBJECTIVITY

***Jorge Ferreira Vaz, Architect, PhD***

Instituto Politécnico de Bragança,  
Escola Superior de Tecnologia e de Gestão, Portugal

---

## **Abstract**

The discretionally and the appraisers' subjectivity that characterize traditional real estate valuation are still allowed to take part in the formation of the asset price even when respecting international standards (EVS, IVS) or Appraisal Institution's regulations (TEGOVA, RICS, etc.).

The application of econometric and statistical methods to real estate valuation (especially on mass appraisals that comprehend a huge amount of data) aims at the elimination of subjectivity on the appraisal process. But the unanswered questions underneath this subject are the following: In what consists the subjective component on real estate appraisal value formation? How much is the value presented by the appraiser influenced by the economic environment or by the building or neighborhood social status? What are the inherent and exterior factors that concur to the enhancement of the subjective component on real estate price formation?

In this study an overview across appraisal's bibliography is made in order to determine which real estate inherent and exterior factors are more important on price formation.

---

**Keywords:** Real estate, appraisal, economics, subjectivity, discretionarily

## **Introduction**

The research conducted in this work has been motivated by the recurrent discussion on the subjectivity inherent to the discipline of real estate valuation. References to the influence of external factors to the appraisal as the economic situation and the perception (or induction) of the appraiser are transverse to the literature of real estate valuation, being subjectivity commonly accepted by this scientific area authors as underlying to the valuation process.

The question raised by Cladera, Roca (1996) on the conclusions of his essay *La valoración inmobiliaria: ¿ciencia, arte u oficio?* (property valuation: science, art or craft?): "*How to overcome the issue of induction as the dominant method for determining our knowledge of real estate value?*"

has been the trigger to investigate the importance of the subjective factors have on the price formation equation and how real estate appraisal bibliography and, consequently, its authors, deal with it on their scientific publications.

Thus, it is intended understand the degree of importance of subjective factors influencing the formation of probable transaction value of the property in order to minimize the impact of this subjective component in pricing, thereby contributing to the reducing discretion in property valuations

## I.

Property valuation is an extremely important factor in maintaining a stable financial market climate and is assuming within the present economic crisis an even greater role. At a time when financial institutions hamper access to mortgage credit due to increased credit risk and the outstanding claim and regulators require capitalization and increased core capital ratio of banks, determining the market value of the property using objective and universal methods (applied by all appraisers) assumes greater significance. Also, removing the discretionary factors from the value of property calculating process should be the way forward for the real estate valuation discipline, pursuing the goal of producing reliable assessments – mortgage lending values - that accurately reflects the actual market value of the property.

The recognition of the importance of the correlation between real estate valuation and market value of the property is assumed as a guarantor of stability of the economic and financial markets over time, as it is that the value attributed to property by valuations agree with its market value on the long term. On the year of 1983 Leicester University has organized a conference on " Land Management : New Directions", which is assumed as the first time in the post- war period in which was discussed the issues raised by market operators relating to real estate markets and the traditional methods of property valuation. They also discussed the growing recognition by real estate appraisal professionals assessing the importance of their work, the challenges faced and the techniques and methodologies applied (Cadman 1985).

In addition to knowing the valuation methodologies, to the valuation specialist is required great knowledge of the real estate markets in which it operates, urbanistic, planning and valuation regulations applicable, as well as the techniques and materials used in construction. The practice of valuation is becoming more and more complex due to the introduction of advanced methods of valuation as the applied in mass appraisal (neural networks, econometric methods , spatial regressions , among others), forcing the area professionals to constantly update and improve their theoretical

understanding of the discipline to keep up with its progress and developments.

In order to establish valuation techniques supported by reliable methods, several statistical methods have been developed in recent decades, using econometric models applied to real estate appraisal. The estimating of the market value of property by the hedonic pricing method is based on determining the factors (independent variables) that form the property's value and their interrelationships. In theory, the overall value of a property is the linear combination of the implicit prices of the value of each explanatory variable.

In theory, the definition of market value is very simple, consisting of the agreement value between a property seller and a buyer, where possible subjective factors that may interfere with the performance of the two participants are eliminated. However, the attribution of value to a property incorporates additional problems, so the appraiser needs to use all the tools and information and knowledge available to calculate a reliable appraisal value.

Nebreda González et al. (2006) use the Royal Spanish Academy (RAE) dictionary to define Value, Valuation and Rate. Thus, value is a "quality of things, whereby for possessing them is given a sum of money or equivalent" while Valuation is to "find the fair price or appraisal of things" and assessment is defined as "pointing the price of a thing". In addition, the authors report that "to Rate is to associate a monetary amount to a given good (asset) or right, depending on their qualities and as a result of a particular market situation", noting that the property valuation is linked with market economics and property law.

Real estate market is a very particular market, since the real estate assets have very different characteristics of the goods and products traded in other markets in which the value is defined in advance and it's known by all market participants. Thus, housing market cannot be considered a traditional market because it doesn't follow the same rules of supply and demand as other goods exchanged.

Being a peculiar market its fluctuations are strongly affected by many different situational changes, such as an inflationary situation, the approval or disapproval of an urban plan or simply by supply shortages caused by any external or unforeseeable circumstances. Property valuation differs from other types of urban valuations on which the aim is to find the value, not the use, nature or quality of a particular urban soil without reference to the estimated value (Roca Cladera 1987).

Furthermore, the purchase of real estate can incorporate a subjective dimension that distorts the normal functioning of the market, making the price the buyer is willing to pay is higher than the market value for reasons

unrelated to the property such as the purchase of a plot or an apartment next to a property already owned by the buyer or because it is the former family home, situations where the buyer adds to the market value of the property a subjective value because of factors that are also subjective.

To consider, explore and promote these subjective factors as real estate brokers seek through advertising campaigns aimed at increasing sales is not allowed to professional appraisals, whose market analysis should be objective in what refers to the goods physical or extrinsic characteristics, such as location and the economic situation. On this regard, Llinares and Page (2011) used a *Kansei Engineering* model to evaluate the subjective preferences of consumers in the real estate markets, measuring the subjects opinion's emotional component concerning the acquisition of real estate, using a technique of translating the feeling and image of the consumer for a product based on studying the consumers perception when in the presence of a particular product, using statistical and psychological methods from consumer surveys.

The aim of the property valuation is the determination of the market value of properties by the use of objective and scientific methods. Despite the use of those methods, subjectivity and discretionarily are concepts commonly associated with the practice of appraisal as a result of the introduction into the price formation equation of the subjective component, situation that derives from the appraiser's perception and external factors to the property, such as socioeconomic factors and location.

Although failing to measure its effect, references to the influence of subjective factors are transverse to all real estate valuation discipline's literature. Ramirez Pacheco (2012 ) states that "the economic conditions constraints, market dynamics, parameters linked to socioeconomical, functional and environmental characteristics of their location, physical architectural characteristics, urban situation according to the legal framework, comprise a set disciplines that influence the valuation of real estate", assuming, that, among other factors, the economic situation affects the real estate valuation. Following the same line of reasoning, Professor Diego Valiente<sup>13</sup> states that valuations market players are under suspicion at this stage of crisis, because of their performances are driven or repressed by factors that are external to their work, such as economic factors.

On the same topic, Ayala Alvarez (2008) states that "valuing an asset is the result of quantitatively express its functional qualities, modifying the

---

<sup>13</sup> In the Specialization Course of Land and Construction Appraisal - CVSE 2010 at ETSAM - UPM (Superior Technical School of Architecture – Polytechnic University of Madrid). Scientific coordination: Architect PhD Federico García Erviti.

result by the conditions imposed by the market at that place and time, as well as other technical and legal considerations (...)" . It should be noted at this point the relativity of valuation, since it is not an absolute value, as it is affected by the operator's subjectivity which should be minimized. This author points the way for the subjectivity reduction through the appraiser's experience and greater knowledge of the housing market in the area where the asset is being valued.

Cladera Roca (1987) refers to the aspects that influence the practice of real estate appraisal stating that "in the difficult art of valuing, which is nothing but a deep understanding of the overall country's situation, including present political and economic issues coupled with a great experience, intuition and common sense, the architects in our country enjoy a broad base of technical expertise, and hence a greater reliability in our own decision when determining the value of the property". In respect to automated methods of valuation within the market, the author compares traditional methods of valuation techniques and automated systems, noting that the latter "tend to limit to the maximum appraiser's arbitrariness or subjectivism when adjusting comparable property's characteristics, aiming to maximize the objectivity of the appraisal process". The referred author also argues that objectivity, efficiency and appropriateness in value assessment are the great advantages of these methods, pointing one more time to objectivity as the path to be pursued by the valuation discipline.

In the same ideological direction of the previous text is placed Cladera Roca (1996)<sup>14</sup> himself in an article on which discusses the epistemology of real estate valuation discipline, tempting to figure out the importance of qualitative and quantitative factors in property valuation techniques. To find out the answer to this question, he refers the subjective parameters existing in each valuation method. In the market method he enumerates the evaluation of the location and the different attributes of the building in the property's comparable selection phase and homogenization (between the property to value and comparable chosen) as subjective elements, considering that "the individualized perception of each value plays a decisive role in determining the value". Regarding the income capitalization method, the subjective component deals with determining the capitalization rate, while in the replacement cost method subjectivity is linked to the determination of depreciation. Concerning the residual method, the "concept fraught with subjectivity" is the "determination of the market coefficient, which assesses costs and benefits of marketing".

The same author states that "Property valuation is the discipline that aims at determining the market value of real estate assets". Market value and

---

<sup>14</sup> La valoración inmobiliaria: ¿ciencia, arte u oficio?; Catastro Magazine. January, 1996.

not any other concept associated with the price or value is the theoretical object of valuation. And as a theoretical discipline, real estate valuation uses objective and scientific methods in estimating the value. Therefore, it is necessary to distinguish theoretical valuation discipline from the real estate valuation practice. The practice of valuation is an application, necessarily subjective, tainted by the perception of each appraiser, of the scientific objectives and methods developed by the theory. In this sense, it can be said that «value is an opinion»; not an opinion of what the price should be, but what the market value really is". In addition, in the aforementioned publication, the theoretical debate about the objectivity/subjectivity of the valuation discipline is discussed, associating it to the theoretical distinction between value and price. "Urban prices are therefore subjective, to the extent that they represent a psychological measure (i.e. formed in the mind) of people (or companies) of property's utility, but are objectively determined by the division and the physical and social structure of urban space. Prices (subjective) reveal the value (target) of the urban spatial structure. And the theory of spatial location offers sufficient theoretical and scientific elements to address an objective analysis of the formation and distribution of property values“.

In the same text (Roca Cladera 1996), the author also discusses the subjective dimension of the location variable, referring that market value should reflect not only the produced component, but also the irreproducible (non-repeatable) dimension, that is location. Starting from location in the context of use or trading values, we move to the subjective dimension that inherent to location, since the intrinsic value of a given location is different for different people or activities, i.e. different buyers attribute different values at a given location, and so will different appraisers.

In the same line of thought, the author raises questions related to appraisal's objectivity and subjectivity: "What are (real estate) prices? Are subjective in nature, in response to the demand variable opinion? Or are they objectively determined by the economic reality? What is (real estate) value? Can we objectively define value? What is valuation? Is it simply the art or practice of subjectively estimate the value? Or is it a theoretical discipline with sufficient elements to become a scientific method of determination of objective knowledge?" At the conclusion of the text one last question arises: "How to overcome the issue of induction as the dominant method for determining our knowledge of real estate value?", that is the challenge that pursues the theoretical body of valuation, in order to minimize subjectivity on the evaluation process. According to the above, this article issues are relevant to the inherent subjectivity in appraisal epistemological theoretical discussion, as are the (subjective) opinion of the real estate valuation players that act in the housing market and the influence of the economic situation,

assuming that the subjective dimension as a recognized factor of the real estate appraisal discipline.

Bernat (1994), cited by Roca Cladera in the referred above article, states regarding the inherent subjectivity to valuation methods: "In summary, we see that under the guise of quantitative methods, epistemologically objective and posed with technicist and utilitarian approaches, subjective parameters are present in all cases. But these subjective components are incorporated in the same variables, so that the result of the model formulations have the appearance of an objective, scientifically correct and unique value. That is, the burden of subjectivity is previously incorporated into the mathematical formula that will give us the objective value".

Concerning the theory of valuation, Bernat (2004) reports that despite not finding explicit references in the literature, it is implicit in the concepts used in the various techniques and methods of value assessment, noting that the theory "should start from the explicit recognition of the existence of valuation methods based on the subjectivist epistemology, what is not materialized at least in the published literature. " In fact, Bernat says that land value formation is based on three main areas: accessibility, urban externalities and social hierarchy of urban space, factors that comprise real estate market segmentation. Those factors incorporate a very high subjective load, since the value of location, neighborhood social status and quality of accessibilities are not valued in the same way by different appraisers or potential buyers and also land values of the cities are "changing its position, and though changing the hierarchy of the urban structure.

On the article *An Objective Methodology for Real Estate Valuations* (Cano Guervós 2006) mentioned a seminar at the University of Granada in 2006 that aimed to broadcast the methodological advances that can help increase the accuracy and objectivity estimates of urban property value, through the adaptation and application of various multivariate techniques, geostatistical and econometric models to property valuation. The authors present a geo-econometric method that combines Regression and *Krigeaje's* method with the Spanish treasure valuation procedure and with appraisal methodologies (for mass or individual valuation), concluding from its application that it can estimate a more reliable urban property and that "its purpose is to provide guidance and objectivity to valuations, which often suffer from the inherent subjective load, mainly in what concerns the assessment of built land value".

In the book "*Valoración Agraria: teoría y práctica*" (Caballer and Mellado 1985) the authors dedicate a part of the book that includes several chapters, the fifth part - *Subjective Objective Valuation* - to analyze the subjective value, objective value, agro-urban valuation and other models of objective-subjective in rural valuations, assuming subjectivity as a factor that

is part of the assessment process, but whose effect is intended to be minimized.

Barahona (2006) writes an essay about real estate valuation on Ecuador claiming that the appraisal or valuation of a property must be a less subjective and more technical process, analyzing the main factors considered in the appraisal process: lot or land (assessed through the Comparative Method), construction (applying the cost method, the Potential of Development method, Direct Income method and the Capitalization method) and the marketing factor. In his article, the author highlights the need "to further valuation processes sticking to procedures that are less subjectivity and more technical" and that "there have been cases extremely curious, to say the least, as one appraisal executed by three different professionals who based their results of their practice - that is, without a doubt, very valuable - and personal criteria, have generated three different appraisal values for the same property, with marked differences between them both in favor of the property owner as for the financial institution that required the value assessment". It also refers to the effect that results from a mortgage valuation whose outcome is far from the market value, implying a situation that compromises banking institutions, as overvalued real properties cause a false view of the assets of the referred entities.

Cassú et al. (2006), suggest the difficulties that often occur in the valuation of a property due to the diversity of situations around the real property valued , noting "the uniqueness of each site and its location and the valuation's temporal window, as different moments in time can lead to different value assessments due to the economic situation, the depreciation of the building or the appreciation of the soil, urban approaches or because they have changed the personal characteristics of the economic agent", proving once again that the subjective dimension is intrinsic to real estate appraisal.

Nebreda Gonzalez et al. (2006) define the appraiser as an expert who is "subject to legal and ethical requirements, taking shape on the activity's mandatory Deontological Codes that affect their formation, competence, independence and objectivity", referring again objectivity as a factor to pursue in valuations.

In respect of traditional valuation methods Gallego Mora -Esperanza (2008) notes that "The work of the expert required knowledge, practice and intuition. There have even been court decisions that have come to indicate that the property valuation is not a science but an art. Traditional methods of valuation are those that are mainly based on expert judgment. (...) However, they also have drawbacks, such as their level of subjectivity, understood not as a lack of quality but as the difficulty to explain clearly and completely the value assessment process and the low production of values." Thus, the author

refers to the appraiser's judgment as the basis of valuation methods, pointing automated valuation methods as the solution to the referred problem.

RICS's Red Book Guidance Note 5 - Valuation Uncertainties (RICS 2010) refers to the subjective character of all appraisals, referring that "all valuations are opinions as to the value that will get a transaction on the date of appraisal, based on assumptions or special preconditions. As in all views, the degree of subjectivity varies significantly, and the same happens to the degree of certainty of the appraised value (i.e., that the probability of the Appraiser's opinion is the same as the final sale price achieved on the date of valuation). Such differences may arise in virtue of the inherent characteristics of the property, market or available information accessible to the appraiser. They are not a reflection of the professional competence or capacity assessor's valuation."

### **Conclusion**

For all the exposed above, it is verified that subjects related to real estate appraisals inherent subjectivity and to the influence of economic conditions on valuation are transverse property valuation literature, which demonstrates a tacit recognition by all agents involved of the importance of subjective factors on price formation. Although econometric models and automated valuation mass appraisal models are pointed as the solution for the discricionarity problem, subjectivity variable is still left apart of valuation models, which means that an important price formation variable is left out of the price formation equation.

The unaddressed and, consequently, unanswered question is how to incorporate the subjective component on property valuations, i.e., what is the magnitude of the real estate value that is explained by subjective variables - variables whose values depend on the appraiser's perception. The challenge is to understand the importance of the subjective component in real value versus the objective component, measuring objective and subjective variables structural weights and thus contributing to the minimization and/or elimination of subjectivity on the value formation equation.

### **References:**

A.A.V.V. Novedades en la Teoría General de Valoración. Aplicaciones. edited by R.H. PLEGUEZUELO. Edtion ed. Granada, España: Editorial Universidad de Granada, 2004. ISBN 84-338-3107-0.

ADAIR, A., M. L. DOWNIE, S. MCGREAL AND G. VOS European Valuation Practice Edtion ed. Saffron Walden, ESS, United Kingdom: Taylor & Francis, 1996. ISBN 0419200401.

ASB, A. S. B.-. Uniform standards of Professional Appraisal Practice edited by T.A. FOUNDATION. Edtion ed. United States of America, 2012. ISBN 978-0-9798728-6-0.

AYALA ÁLVAREZ, J. Valoración Inmobiliaria. Edtion ed.: Publicaciones Vértice, S.L., 2008. ISBN 9788492578917.

BAGDONAVICIUS, A. D., STEPONAS Modelos de valoración automatizada en Lituania. CT Catastro, Octubre 2006.

BARAHONA P., G. Ecuador. El avalúo de un inmueble: un proceso menos subjetivo y más técnico. 2006.

BERNAT FALOMIR, J. Epistemologia de la Valoració Inmobiliaria: Estudi de la gestió a partir de la bibliografia en catalá i castellá. Universidad Politécnica de Cataluña, 1994.

BERNAT FALOMIR, J. Los cambios en la estructura de valores en el territorio: el ejemplo de Barcelona. Revista CT/Catastro, Julio 2004 2004, (51), 41-58.

CABALLER, V. AND V. C. MELLADO *Valoración agraria: teoría y práctica*. Edtion ed.: Mundi-Prensa, 1985. ISBN 9788471141576.

CADMAN, D. Chiddick, David and Millington, Alan (eds.)," Land Management: New Directions"(Book Review). Town Planning Review, 1985, 56(1), 112.

CANO GUERVÓS, R. A. C. O., J. M. . Una Metodología Objetiva para las Valoraciones Inmobiliarias. 2006.

CASSÚ, E., J. C. FERRER AND D. COROMINA Valoración inmobiliaria en situación de incertidumbre. Método del Coste. Revista del Claustro de Profesores de la Facultad de Contaduría y Ciencias Administrativas - Universidad Michoacana de San Nicolás de Hidalgo, 2006, 14.

CHAMPNESS, P. Normas Europeas aprobadas sobre tasación de Bienes Inmuebles - Edición española.

edited by C.S.D.L.C.D.A.D.E.C.A.P.D.S.D.V.D.E. ATASA. Edtion ed.: EFCA, S.A., 1998.

FOUNDATION, A. S. B.-T. A. Uniform Standards of Professional Appraisal Practice 2010-2011 USPAP Edtion ed.: Appraisal Standards Board, 2010. ISBN 0979872839.

GALLEGO MORA-ESPERANZA, J. La inteligencia artificial aplicada ala valoración de inmuebles. Un ejemplo para valorar Madrid. . CT Catastro, Abril 2004 2004, (50).

GARRIDO-LESTACHE RODRÍGUEZ, E. Y. G. C., IGNACIO. Método de comparación. In A.E. HUMERO MARTÍN ed. Tratado técnico-jurídico de la edificación. Cizur Menos (Navarra): Thompson Reuters, 2010, vol. Tomo V. Valoraciones inmobiliarias.

GONZALEZ NEBRED, P., J. TURMO DE PADURA AND E. VILLARONGA SÁNCHEZ La valoración inmobiliaria: teoría y práctica. Edtion ed.: Consejo Superior de loa Colegios de Arquitectos de España : Unión de Arquitectos y peritos Forenses de España : La Ley, 2006. ISBN 9788497256506.

ISNARD, F. Real Estate Valuation at the Strike of the European Hour. Journal of the Recognised European Valuer, 2013, (2).

IVSC International Valuation Standards - IVS 2011. Edtion ed.: International Valuation Standards Council - IVSC, 2011a. ISBN 978-0-9569313-0-6.

LLINARES, C. AND A. F. PAGE Kano's model in Kansei Engineering to evaluate subjective real estate consumer preferences. International Journal of Industrial Ergonomics, 2011, 41(3), 233-246.

PASYMOWSKI, E. 2006. Econometric Solutions for Real Estate Valuation Automated Valuation Models - Friend or Foe? In Proceedings of the 23rd Pan Pacific Congress of Real Estate Appraisers, Valuers and Counselors, San Francisco, California, USA, September 2006.

PASYMOWSKI, E. How to Discredit Most Real Estate Appraisals in One Minute. In TriState REALTORS Commercial Alliance Newsletter Spring 2007. Chester Springs, Pennsylvania 19425: TriState REALTORS, 2007.

RICS, R. I. O. C. S.-. Normas de Avaliação RICS Edição Portuguesa - RICS Red Book. edited by R.I.O.C.S. (RICS). Edtion ed. Coventry: Royal Institution of Chartered Surveyors (RICS), 2010. 120 p. ISBN 978-184219-636-6.

ROCA CLADERA, J. La valoración inmobiliaria: ¿ciencia, arte u oficio? In CT/Catastro. Madrid: Dirección General del Catastro - Ministerio de Economía y Hacienda, 1996, vol. Enero 1996, p. 8-20.

ROCA CLADERA, J. *Manual de Valoraciones Inmobiliarias*. edited by A. ECONOMÍA. Edtion ed. Córcega - Barcelona, 1987. ISBN 84-344-2010-4.

RAMIREZ PACHECO, G. Desarrollo de un Modelo de Formación del Valor Inmobiliário en Áreas de Crecimiento Suburbano. Escuela Técnica Superior de Arquitectura de Madrid - Universidad Politécnica de Madrid, 2012.

SANTOS REIS, V. M., M. L. DOWNIE, P. FISHER AND A. FERNANDES The practice of real estate valuation in Portugal. Journal of Property Investment & Finance, 2002, Vol. 20 (2), 181 - 203.

TEGOVA European Valuation Standards 2012 - The European Group of Valuers' Associations. Edtion ed. Belgium: Gilis nv/sa, 2012. ISBN 9789081906005.

UNITED NATIONS ECONOMIC COMMISSION FOR EUROPE (UNECE), W. P. O. L. A. W., REAL ESTATE MARKET ADVISORY GROUP (REM). Policy Framework For Sustainable Real Estate Markets: principles and guidance for the development of a country's real estate sector [online]. [Geneve]: TECNOBORSA, 2010.

ZADEH, L. A. E. F., KING-SUN (ED); TANAKA, KOKICHI (ED); SHIMURA, MASAMICHI (ED) Fuzzy sets and their applications to cognitive and decision processes. edited by A. PRESS. Edtion ed. Oxford, England, 1975.